CLAIMS

What is claimed is:

Claim 1. A method for measuring relative position of fixed or slow-moving points in close proximity comprising:

receiving a set of satellite signals with a first receiver corresponding to a first position;

receiving a related set of satellite signals with a second receiver corresponding to a second position;

computing a position of said second position based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.

Claim 2. The method of Claim 1 further including:

receiving a third set of satellite signals with said slave receiver from an antenna corresponding to a third position; and

computing a position of said third position based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.

Claim 3. The method of Claim 2 further including switching from said related set of satellite signals to said third set of satellite signals.

Claim 4. The method of Claim 1 wherein said carrier phase differencing include Real Time Kinematic (RTK) solutions.

Claim 5. The method of Claim 1 wherein said first receiver and said second receiver are positioned within sufficient proximity to facilitate wired communication between said first receiver and said second receiver.

Claim 6. The method of Claim 1 further including combining satellite signals from at least two of said first antenna said second antenna, said third antenna, and another antenna to form at least one of said set of satellite signals and said related set of satellite signals, said at least two of said first antenna said second antenna, said third antenna, and another antenna exhibiting a known relative geometry.

Claim 7. The method of Claim 1 wherein said receiving a related set of satellite signals occurs at a time selected by said first receiver, said time selected to achieve receiving an optimal set of satellite signals available based on satellite geometry.

Claim 8. The method of Claim 1 further including configuring said first receiver as a master and said second receiver as a slave.

Claim 9. A system for measuring relative position of fixed or slow-moving points in close proximity comprising:

a first receiver in operable communication with a first antenna configured to receive a first plurality of satellite signals at a first position;

a second receiver in operable communication with a second antenna configured to receive a second plurality of satellite signals at a second position;

at least one of said first receiver and said second receiver computing a position corresponding to a position of said second antenna based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.

Claim 10. The system of Claim 9 further including:

a third antenna configured to receive a third set of satellite signals at a third position; and

at least one of said first receiver and said second receiver computing a position of said third position based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.

Claim 11. The system of Claim 9 further including a switching device in operable communication with said second receiver configured to facilitate switching from said second set of satellite signals to a third set of satellite signals.

Claim 12. The system of Claim 9 wherein said carrier phase differencing include Real Time Kinematic (RTK) solutions.

Claim 13. The system of Claim 9 wherein said first receiver and said second receiver are positioned within sufficient proximity to facilitate wired communication between said first receiver and said second receiver.

Claim 14. The system of Claim 9 further including combining satellite signals from at least two of said first antenna said second antenna, said third antenna, and another antenna to form at least one of said set of satellite signals and said related set of satellite signals, said at least two of said first antenna said second antenna, said third antenna, and another antenna exhibiting a known relative geometry.

Claim 15. The system of Claim 9 wherein said related set of satellite signals is received at a time selected by said first receiver, said time selected to achieve receiving an optimal set of satellite signals available based on satellite geometry.

Claim 16. The system of Claim 9 wherein said first receiver is a master and said second receiver is a slave.

Claim 17. A system for measuring relative position of fixed or slow-moving points in close proximity comprising:

a means for receiving a set of satellite signals with a first receiver corresponding to a first position;

a means for receiving a related set of satellite signals with a second receiver corresponding to a second position;

a means for computing a position of said second position based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.

Claim 18. A storage medium encoded with a machine-readable computer program code, the code including instructions for causing a computer to implement a method for measuring relative position of fixed or slow-moving points in close proximity, the method comprising:

receiving a set of satellite signals with a first receiver corresponding to a first position;

receiving a related set of satellite signals with a second receiver corresponding to a second position;

computing a position of said second position based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.

Claim 19. A computer data signal, the computer data signal comprising code configured to cause a processor to implement a method for measuring relative position of fixed or slow-moving points in close proximity, the method comprising:

receiving a set of satellite signals with a first receiver corresponding to a first position;

receiving a related set of satellite signals with a second receiver corresponding to a second position;

computing a position of said second position based on at least one of code phase and carrier phase differencing techniques wherein at least one of:

a clock used in said first receiver and a clock used in said second receiver are synchronized to eliminate clock variation between said first receiver and said second receiver, and

said first receiver and said second receiver share a common clock.